

residences, hospitals, prisons, recreation areas, commercial areas, and wildlife sanctuaries.

Alternative-Case Release Scenario Analyses

To assist in emergency response planning, the facility has developed ACSs as required by the RMP regulations. ACSs and hazard assessment results are useful for assessing the potential hazards posed by the facility and developing or assessing emergency response plans to respond to such an event. These scenarios are unlikely, but are physically possible.

For the ACS analyses, the following assumptions were made: rural terrain surrounding the facility and atmospheric conditions of 3.0 mps wind speed, D stability class, and 77°F ambient temperatures. As allowed by the RMP regulations, active mitigation measures were considered and are described under each scenario. The facility conducted dispersion modeling of the ACSs using RMP*Comp version 1.07.

Alternative-Case Release Scenario Analysis: Chlorine

An ACS associated with the release of toxic substances at the facility is an employee error while disconnecting a chlorine container after the filling process has been completed. The Milford facility believes that this scenario, although unlikely, could occur based on its knowledge of similar accidents that have occurred at other chlorine repackaging facilities. This scenario would not result in a significant release of chlorine from a tank or vessel, because chlorine detectors continually monitor the area and the railcar unloading station is equipped with automatic shutdown valves. The amount of chlorine released as a result of an improper connection, would be less than 1 pound.

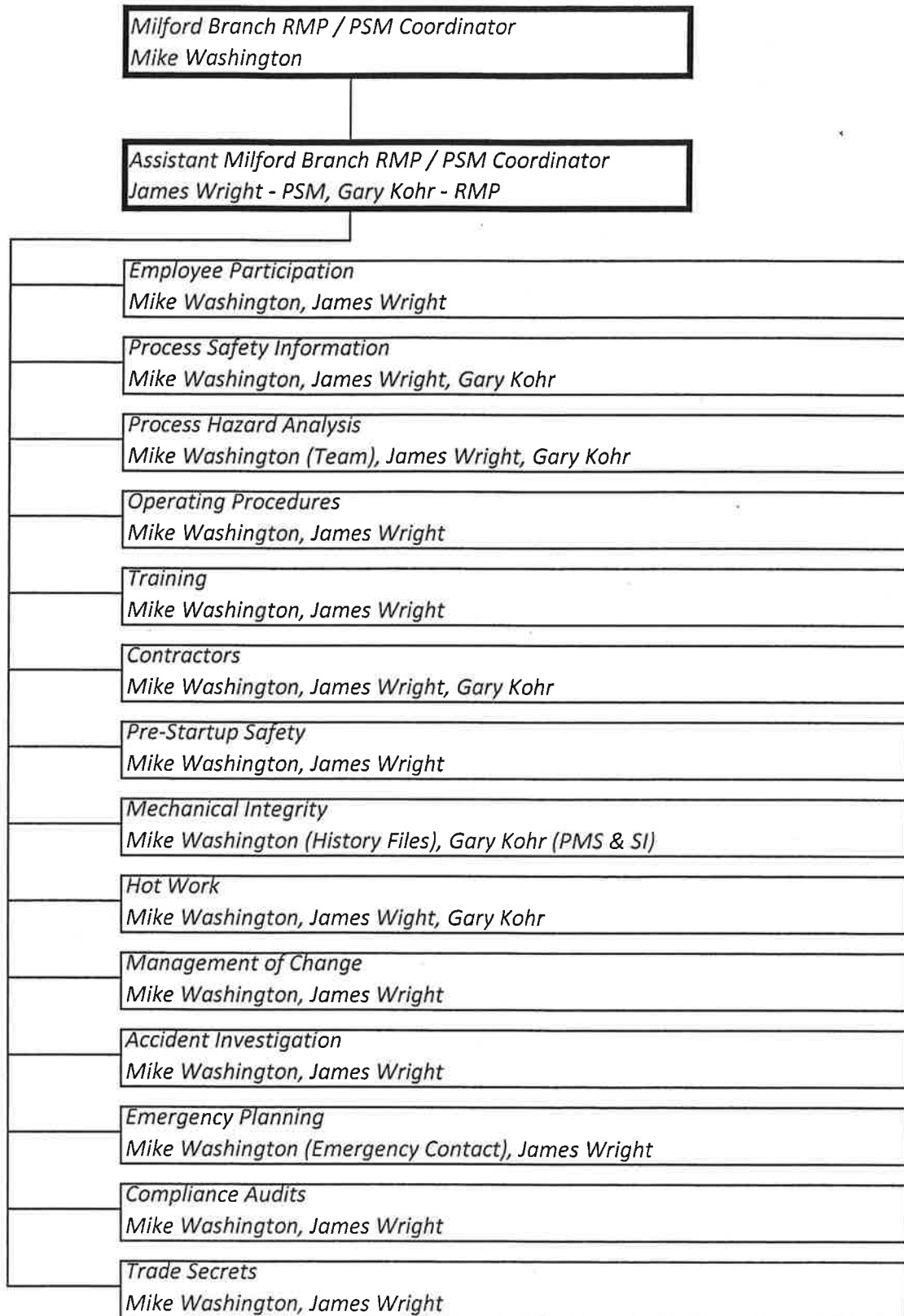
The maximum distance to the toxic endpoint of 0.0087 mg/l under these conditions is less than 0.1 mile. Documentation supporting these dispersion-modeling results is included in Appendix C.

A map of the region surrounding the Milford facility is shown in Appendix C. To illustrate the potential alternative-case release impact zone, the facility has placed a circle on the map with its center at the point of the release and a radius determined by the dispersion modeling analysis described above. The Milford facility has estimated the residential population within this zone, using U.S. Census Data from 2000, to be zero (0) people. There are no public or environmental receptors present within the alternative-case impact zone.

Alternative-Case Release Scenario Analysis: Sulfur Dioxide

An ACS associated with the release of toxic substances at the facility is the release of a trace amount of sulfur dioxide as a result of an improperly closed valve. The Milford facility believes that this scenario, although unlikely, could nonetheless, occur. A release of this type would not result in a significant release of product given that all full

MILFORD BRANCH RMP / PSM ORGANIZATIONAL CHART



CONTRACTOR SAFETY

The key point in this element is that this policy only applies to those contractors performing maintenance or repair on, in or around any process involving a highly hazardous chemical.

At the Milford Branch, the two contractors that this element applies to are Virginia Compressor and Trolley Electric. Both contractors periodically perform maintenance and repair work on our compressors and electric respectively.

Requirements for:

- 1. Virginia Compressor and Trolley Electric**
 - * JCI's Hazard Communication Training Program (ST III)**
 - * JCI's Visitor Safety Rules (SF II 7-9)**
 - * JCI's Contractor Safety Program**
 - Contractor's Statement (ST III 48)**
 - Contractor Evaluation Form**
 - Contractor Employee Injury and Illness Log**
 - * Their Health and Safety Program**
- 2. All others – Preferred Contractor List**
 - * JCI's Visitor's Safety Rules**

The Health and Safety Programs for both Virginia Compressor and Trolley Electric are maintained in a separate file.

CONTRACTORS - 29 CFR 1910.119 (h)

JCI Jones Chemicals, Inc. Hereby Certifies:

- It has obtained and evaluated information regarding the contract employer's safety performance and programs (i.e., written safety plans, OSHA 200 Logs, etc.).
- It has informed contract employer of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process (i.e., JCI's OSHA Hazard Communication Training Program, MSDSs, etc.).
- It has explained to contract employer the applicable provisions of the facilities emergency action plan (i.e., Contingency Plan, etc.).
- It has developed and implemented safe work practices consistent with the facility's operating procedures, to control the entrance, presence and exit of contract employer and contract employees in covered process areas (i.e., lockout/tagout, confined space entry, opening process equipment or piping, etc.).
- It will periodically evaluate the performance of contract employer in fulfilling their obligations as discussed below.
- It will maintain a contract employee injury and illness log related to the contractor's work in JCI process areas.

Name James WrightSignature [Signature]Date May 20, 2011

Contract Employer Hereby Certifies:

- It has assured that each contract employee is trained in the work practices necessary to safely perform his/her job.
- It has assured that each contract employee is instructed in the known potential fire, explosion, or toxic release hazards related to his/her job and the process, and the applicable provisions of the emergency action plan.
- It will document that each contract employee has received and understood the training required herein, and that it has prepared a record which contains the identity of the contract employee, the date of training, and the means used to verify that the employee understood the training.
- It has assured that each contract employee follows the safety rules of the JCI facility including the safe work practices contained in the facility's operating procedures.
- It has advised JCI of any unique hazards presented by the contract employer's work, or of any hazards found by or discovered during the course of the contract employer's work at JCI.

Contractor Tolley ElecName DAVID KWALSignature [Signature]Date 5/20/11

PROCESS SAFETY INFORMATION

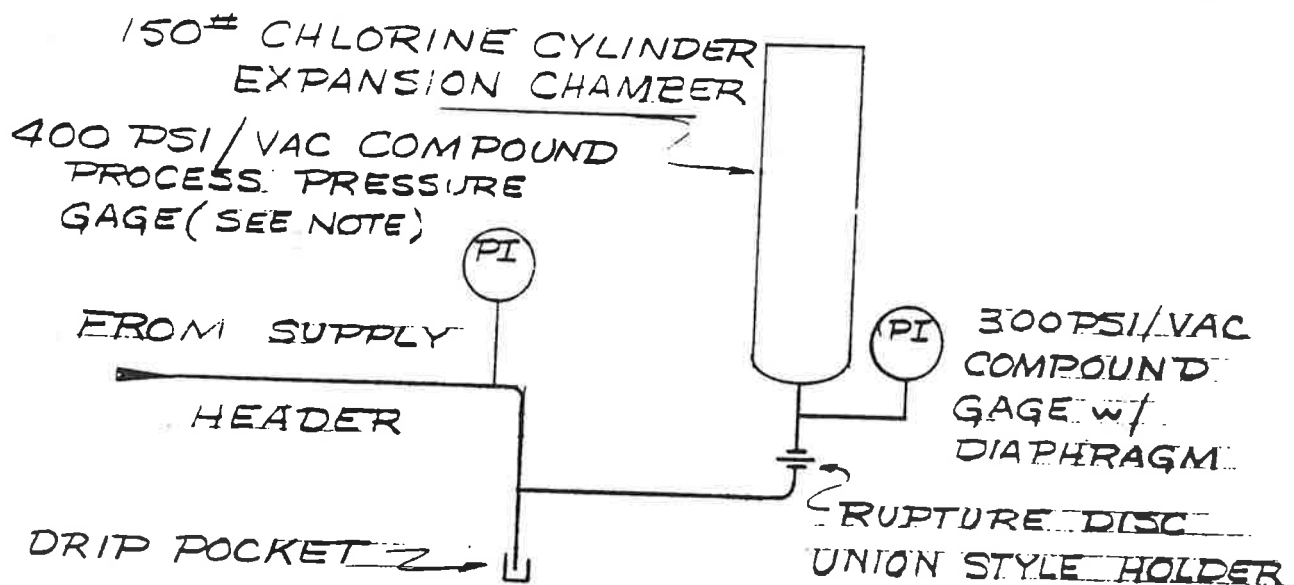
COMPLIANCE AUDIT

Relief System Design

The JCI Jones Chemicals Inc. facility located at 16248 Industrial Dr in Milford, Virginia has a multifaceted relief system in place consisting of the following components:

1. **Expansion Chambers** – The expansion chamber system consists of one inverted 150 lb cylinders installed in the main chlorine liquid supply lines coming in from the railcars and is mounted inside the east wall adjacent to the blow/vacuum tons in the central warehouse. It is equipped with pressure gauges that serve to indicate a rupture in the system. The system is equipped with PUUT type rupture discs that are designed to rupture at 392.93 psi. This system was installed in 1996.
2. **Railcars** – All railcars are equipped with pressure relief valves that are designed to rupture before the internal pressure of the railcar exceeds its' recommended limit. It is designed to vent when the internal rail car tank pressure exceeds 225 psig for type 105A300W rail cars or at 375 psig for type 105A500W rail cars. The venting of either chlorine or sulfur dioxide vapor in this manner prevents a major buildup of pressure within the rail car's tank that could result in a catastrophic failure. Once pressure is reduced below the set point the valve reseats. This minimizes the amount of vapor released.
3. **Ton Container (Multi-Unit Tank Car Tanks)** - All ton containers are equipped with fusible metal pressure relief devices. Most have six fusible metal plugs, three on each end, spaced 120° apart. The fusible metal is designed to melt between 158°F and 165°F to relieve pressure and prevent rupture of the container in case of fire or other exposure to high temperature.
4. **Cylinders** - All cylinders are equipped with a fusible metal pressure relief device which is a threaded plug containing the fusible metal screwed into a tapped hole in the valve body, below the valve seat. The fusible metal is designed to melt between 158°F and 165°F to relieve pressure and prevent rupture of the container in case of fire or other exposure to high temperature.

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- RUPTURE DISC TO BE 1" UNION STYLE w/ VAC. SUPPORT. PRESS. RATING OF DISC MUST BE BASED ON PRESSURE LIMITS OF EQUIPMENT, CONSULT ENGINEERING
- ALL 1" ϕ SCH. #80 SEAMLESS STEEL PIPE ASTM A106 GRADE A OR B
- ALL FITTINGS TO BE 3000# ANSI B16.11 FORGED CARBON STEEL ASTM A105
- RUPTURE DISC. MUST DISCHARGE DIRECTLY INTO EXPANSION CHAMBER
- ALL PIPING MUST BE IN ACCORDANCE W/ JONES ENGINEERING STANDARDS MANUAL SECTION III - D
- A PROCESS PRESSURE GAGE MUST BE INSTALLED IN THE SYSTEM TO PROVIDE DATA ON SYSTEM PRESSURE. IF THERE IS AN EXIST'G. GAGE, A NEW ONE WILL NOT BE REQUIRED.
- THIS GAGE SHOULD HAVE A 'MEMORY HAND'

JONES CHEMICALS, INC.
CALEDONIA, NEW YORK

TITLE CHLORINE EXPANSION
CHAMBER-PIPING DETAIL

SCALE: 1" = 1'-0"
DR. JMC DATE 2/23/89
CHK. JPS DATE 2/28/89
APPR. DATE

III-18.1

REV	DATE	DESCRIPTION	BY	CHK	APP
1	3/2/80	ADD. PRODUCT SPECS.	JM	JS	
2			JS	JS	